

WHAT IS CLAIMED IS:

1. An inspection method comprising:

using a lithographic apparatus to pattern a beam with a test pattern having at least one degree of symmetry and to project the pattern onto a substrate;

forming, at a surface of the substrate, a test structure corresponding to the test pattern;

measuring a reflection spectrum of the test structure; and

deriving, from the reflection spectrum, information indicative of an amount of at least one type of aberration of the lithographic apparatus.

2. The inspection method according to claim 1, wherein said test pattern is sensitive to the at least one type of aberration.

3. The inspection method according to claim 1, wherein said test pattern comprises a two-bar grating.

4. The inspection method according to claim 3, wherein said a two-bar grating has an inner duty ratio and an outer duty ratio different from the inner duty ratio.

5. The inspection method according to claim 3, wherein said information includes information indicative of comatic aberration.

6. The inspection method according to claim 5, wherein said deriving includes constructing a representation of the two-bar grating with the inner and outer duty ratios as parameters.

7. The inspection method according to claim 1, wherein the test pattern comprises a hexagonal array of dots.

8. The inspection method according to claim 7, wherein said information includes information indicative of three-wave aberrations.

9. The inspection method according to claim 7, wherein said information includes differences in the relative diameters of dots in at least one unit cell of the array.

10. The inspection method according to claim 1, wherein said test pattern comprises first, second and third structures having a common basic symmetric form,

wherein said first and second structures have equal but opposite asymmetric deviations from the common basic symmetric form.

11. The inspection method according to claim 10, wherein said third structure has an additional asymmetric deviation as compared to said second structure.

12. The inspection method according to claim 11, wherein said information is based on a first difference between scatterometry signals obtained from said first and second structures and a second difference between scatterometry signals obtained from said third and second structures.

13. The inspection method according to claim 12, wherein said deriving information comprises dividing the first difference by the second difference.

14. The inspection method according to claim 10, wherein the first structure is a two-bar grating having bar widths w_1 and w_2 , where w_1 is greater than w_2 , and wherein the second structure is a mirror image of the first structure.

15. The inspection method according to claim 14, wherein the third structure is a two-bar grating having bar widths $(w_2 + d)$ and $(w_1 - d)$, where d is less than $(w_1 - w_2)$.

16. The inspection method according to claim 1, wherein said measuring includes using a scatterometer.

17. The inspection method according to claim 16, wherein said measuring includes measuring reflections from the test structure at a plurality of angles.

18. The inspection method according to claim 16, wherein said scatterometer is a normal incidence scatterometer.

19. A device manufactured using the inspection method according to claim 1.

20. A device manufacturing method including the inspection method of claim 1, said device manufacturing method further comprising:

providing the substrate, the substrate being at least partially covered by a layer of radiation-sensitive material;

using a radiation system to provide the beam;

using a patterning structure to endow the beam with the test pattern in its cross-section; and

projecting the patterned beam onto a target portion of the layer of radiation-sensitive material.

21. The device manufacturing method according to claim 20, wherein said measuring includes using a scatterometer.